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Imagery analysis report

Indications of a New Liquid-Propellant SLBM Under Development in the USSR (S)

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INDICATIONS OF A NEW LIQUID-PROPELLANT SLBM UNDER DEVELOPMENT IN THE USSR (S)

1. [REDACTED] Analysis of imagery of submarine-launched ballistic missile (SLBM) research, development, testing, and evaluation (RDT&E) facilities (Figure 1) [REDACTED] indicate that preparations were underway in mid-1980 for the testing of a new liquid-propellant SLBM system. The Soviet facilities reviewed relative to this assessment were as follows:

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Zlatoust Armament Plant 66

Krasnoyarsk Guided Missile and Arms
Plant Voroshilov 4Miass Missile Research and
Development Facility

Zlatoust Rocket Engine Test Facility

Krasnoyarsk Rocket Engine Test Facility

Balaklava Missile Test Center

Severodvinsk Shipyard 402

Severodvinsk Interferometer

Khalmer-Yu Tracking Facility

Nenoksa Naval Missile Test Center

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2. [REDACTED] The timely expansion of production, test, and tracking facilities that were previously associated with SLBM development and test programs suggests that a new liquid-propellant test program was under development. [REDACTED]

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[REDACTED] Since Zlatoust Plant 66 and Krasnoyarsk Plant 4 have been the production facilities for previous SLBM systems, these facilities also may be involved in the production of flight test and/or series production items for the new system. V.P. Maykeyev has been the primary designer of SLBM systems and, therefore, could probably be involved in the design of this system. The facilities at Miass, which is the probable design bureau for Maykeyev,² have steadily been expanding since late 1977, but this expansion may not necessarily be related to SLBM development.

3. (S/D) Since mid-1970, Zlatoust 66 and Krasnoyarsk Plant 4 have undergone expansion that included modifications to some existing buildings and the construction of two new fabrication buildings. The new fabrication buildings were externally complete² and could possibly be functional in time to support assembly of series production models of the new system.

4. (S/D) At Zlatoust Rocket Engine Test Facility (RETF), several buildings have been added since 1976 that may support activities when the vertical test stand is completed (Figure 2). Construction resumed on the vertical test stand in April 1980, and other areas of expansion were also observed.

5. (S/D) New unidentified construction has begun at Krasnoyarsk RETF (Figure 3) near the cold-flow test building. In addition, the control building at the power substation was being expanded,² and since 1976 fuel and oxidizer storage capabilities have also been expanded.

6. (S/D) At Balaklava Missile Test Center (MTC), the former SS-N-8, SS-NX-17, and possibly SS-N-18 ballistic popup test platform was either undergoing modification or dismantlement since late 1978. Platform 3 was used during the SS-N-8 popup test program from mid-1968 to mid-1969, and later the platform underwent modification at Nikolayev Shipyard Nosenko 444 [REDACTED] in 1972 and 1973, being designated platform 5. The platform was then used for the SS-NX-17 and possibly SS-N-18 popup test programs. Presently, the barge is void of its two missile tubes and remains at Balaklava (Figure 4). Partial dismantlement of the barge began in late 1978. A second popup barge, platform 8, which was used in the NE-04 popup test program, was also void of missile tubes; it was at Sevastopol Shipyard Sevmorzhavod 497 [REDACTED] possibly awaiting modification or further dismantlement. The original tubes taken from this barge remained at Balaklava. New construction at instrumentation site 2, the primary monitoring facility (Figure 5) of the popup test area, includes new trenching, three new buildings, and probable modification of the control building. Minor construction was observed at the propellant handling facility where several holes were bored in the concrete hardstands that were adjacent to the underground fuel storage tanks.

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7. [REDACTED] The possible launch tube test tower (Figure 6) at Severodvinsk Shipyard 402 was previously associated with new SLBM development. Modifications to the tower have been linked to previous SLBM test programs, such as the SS-N-8, SS-N-18, and possibly the NE-04. Since late 1979, the tower has been undergoing modifications; the tube door has been replaced. Three unidentified cylindrical objects, [REDACTED] in diameter by [REDACTED] high, have been seen adjacent to the tower since January 1980. A possible inverted launch tube cap, [REDACTED] in diameter, was adjacent to the cylinders in February. [REDACTED] a crane was seen in operation near the tower, and a personnel work platform, [REDACTED] in diameter and [REDACTED] long, was observed on the ground nearby. In addition to the activities at the test tower, a

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FIGURE 1. LOCATIONS OF SOVIET SLBM RDT&E FACILITIES

Y-class nuclear submarine (SSN) void of missile tubes (Figure 7) had been positioned in front of construction hall 1. It cannot be determined at this time whether the Y SSN will be modified to serve as a test platform for the new liquid SLBM, but this possibility exists only in considering the chronology of events leading to the conversion of an H-class nuclear ballistic missile submarine (SSBN)³ that was used for the SS-N-8 test bed, the H-III SSBN.

8. (S/D) A new VT-3 interferometer was under construction on [redacted] approximately 6 nautical miles (nm) south-southeast of Severodvinsk and 16 nm southeast of Nenoksa. The interferometer is oriented northeasterly and will apparently be used to monitor flight tests originating at Nenoksa. In addition, the 64-element telemetry array at Khamler-Yu was undergoing either maintenance or modifications. On [redacted] approximately 14 boxes were seen under the array which was positioned perpendicular to the ground. The boxes appeared to be smaller than the ones associated with the initial construction of the array.

9. (S/D) Activity observed at Nenoksa MTC (Figures 8 and 9) further indicates preparations for a new liquid-propellant missile flight test program. The activities include unidentified construction along the beach area northeast of the facility, additional electronics equipment, and changes within the propellant handling facility that were apparently unrelated to the support of the current flight test program, the NE-04 solid-propellant SLBM. Two helical antennas that were mounted atop the large SLBM assembly/check-out building were removed in late November and December 1979, and by early January 1980, a new unidentified set of antennas was under construction (Figure 9). In addition, two near-cylindrical objects were seen in January mounted atop a tower within the checkout compound. The objects may serve as a calibration device for the new rotatable antennas. The antennas did not appear to be complete and, therefore, have not been available for monitoring the NE-04 flight tests which began in late January. At launch facility C, several rings were observed in February which were [redacted] in diameter. At launch facility B, an unidentified rectangular object was constructed in April 1979 which may have an electronics function. New construction was observed northeast of the facility.

10. (S/D) Some of the tanks seen in the propellant handling facility have been moved or discarded along the fenceline. A new vehicle shed has been under construction in the facility since August 1979 and was nearly externally complete in July 1980.

11. [redacted] With the expansion of the SLBM production and test facilities and the upgrading of tracking facilities, there is reason to believe that a new liquid-propellant SLBM, possibly the D-25¹ or a follow-on to the SS-N-8 or SS-N-18 missile systems, could possibly begin flight testing within the 1982 to 1984 timeframe.

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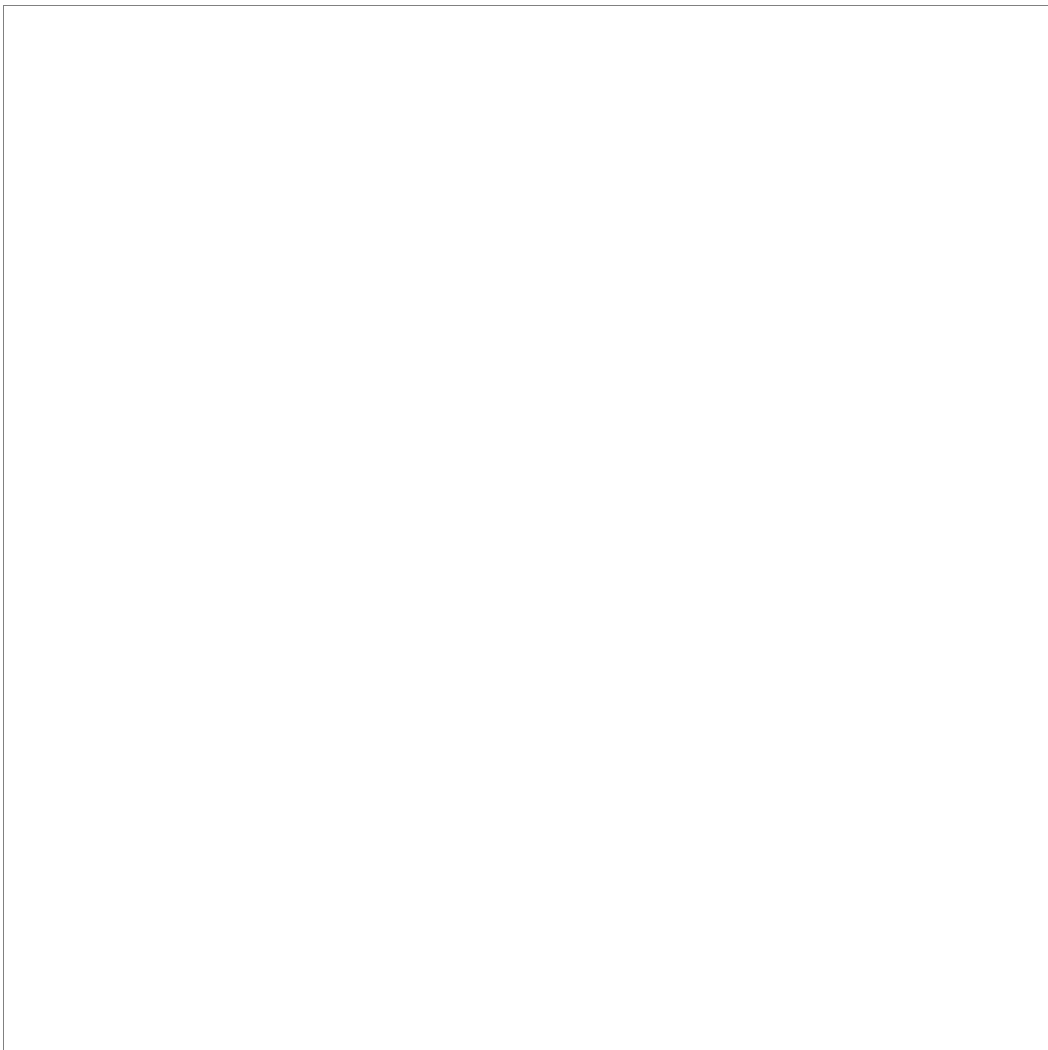
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FIGURE 9. NEW UNIDENTIFIED ANTENNAS, NENOKSA MTC

REFERENCES

IMAGERY

(TSR) All relevant KEYHOLE imagery acquired through [redacted] was used in the preparation of this report. 25X1

DOCUMENTS

- 1. NSA, KG/00/121-78, *Probable New Soviet SLBM System*, D-25, 250203Z Mar 78 (TOP SECRET R [redacted]) 25X1
- 2. NPIC, [redacted] 80, RCA-09/0017/80, *Activity and Developments at Selected Soviet SLBM Production and Test Facilities (S)*, Aug 80 (TOP SECRET R [redacted]) 25X1
- 3. CIA, TCA-17084/70, *Origin and Details of the H-III Submarine at Severodvinsk, USSR*, Aug 70 (TOP SECRET R [redacted]) 25X1

RELATED DOCUMENTS

- NPIC, [redacted] PIR-034/79, *Indications of a Probable New or Modified Liquid-Propellant SLBM Under Development in the USSR (TSR)*, Apr 79 (TOP SECRET R [redacted]) 25X1
- NPIC, [redacted] SR-024/78, *Possible SLBM Test Tower at Severodvinsk Shipyard 402, USSR (TSR)*, Mar 78 (TOP SECRET R [redacted]) 25X1
- NPIC, [redacted] PIR-010/79-1, *64-Element Telemetry Antennas May Indicate New Soviet Missile/Space Programs (TSR)*, Mar 79 (TOP SECRET R [redacted]) 25X1
- (S) Comments and queries regarding this report are welcome. They may be directed to [redacted] Soviet Strategic Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1

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